MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2015/2016

BDM 2384 – DATABASE MANAGEMENT SYSTEM

(All sections / Groups)

1 JUNE 2016
2.30 p.m – 4.30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENTS

This question paper consists of 13 pages (including this cover page).

1. Answer ALL questions in Part A and Part B.
2. Part A must be answered in the OMR sheet provided.
3. Part B should be answered in this question paper itself.

Part A (60 marks)

There are 40 questions in this section and each question carries equal marks. Answer all questions in the OMR sheet provided.

1. Primary benefits provided by a DBMS do not include

   a) limited data sharing
   b) minimal data redundancy
   c) data consistency
   d) integration of data

2. Which of the following is NOT an advantage of the database approach?
   a) Security
   b) Increased productivity
   c) Integrity
   d) Greater complexity

3. Which of the following is not a disadvantage of the database approach?
   a) More difficult recovery
   b) Greater impact of a failure
   c) Balancing conflicting requirements
   d) Greater complexity

4. Data _____ means that the structure of the database can change without the programs having to change.
   a) independence
   b) security
   c) duplication
   d) reliability

5. Eliminating redundant data primarily saves _____.
   a) money
   b) time
   c) space
   d) effort

6. Each record consists of a number of _____ that record facts about that specific person, place, thing, or event.
   a) tuples
   b) fields
   c) events
   d) records

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7. A(n) _____ relation is a structure which satisfies all the properties of a relation except the property which states entries need not be single-valued.
   a) unnormalized
   b) normalized
   c) qualified
   d) combined

8. Using the comparison operators for criteria, operator _____ means "not equal to" or "does not match."
   a) NULL
   b) BLANK
   c) LIKE
   d) NOT

9. A(n) _____ field can be derived from fields included in the database.
   a) example
   b) average
   c) computed or calculated
   d) tactical

10. Tables in a relational database can be linked together if ____.
   a) the tables share a primary key
   b) the tables share a common attribute
   c) the tables have no redundancies
   d) none of the above

11. To find customers with balances equal to $1,123.45, you would enter = _____ as a criterion in the appropriate field.
   a) 112345
   b) $1,123.45
   c) 1123.45
   d) $1123.45

12. The _____ data type is used for character strings.
   a) TEXT
   b) STRING
   c) BLOCK
   d) CHAR

13. The order of the fields listed in the SELECT expression will determine _____.
   a) the order of the fields stored in the table
   b) nothing, the order of the fields is irrelevant
   c) the order in which the results will appear
   d) none of the above

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14. When simple conditions are connected by the word _____ , any of the simple conditions must be true in order for the compound condition to be true.
    a) AND
    b) OR
    c) NOT
    d) JOIN

15. The _____ clause is used to produce a report in a particular order.
    a) ORDER BY
    b) SORT BY
    c) GROUP BY
    d) SELECT BY

16. A qualified but rejected possibility for a primary key is called a(n) _____ .
    a) foreign key
    b) candidate key
    c) alternate key
    d) either B or C

17. A relation (table) that contains a repeating group is called a(n) _____ .
    a) normalized relation
    b) unnormalized relation
    c) first normal form
    d) second normal form

18. An attribute is a(n)_____ if it is not a part of the primary key.
    a) alternate key
    b) nonkey attribute
    c) candidate key
    d) normalized attribute

19. A one-to-many relationship is implemented by including the primary of the "one" table as a(n) _____ key in the "many" table.
    a) primary
    b) alternate
    c) secondary
    d) foreign

20. Locking on a DBMS provides facilities for locking on _____ .
    a) a row
    b) a table
    c) either a row or a table
    d) none of the above

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21. A database can be damaged by _____ .
    a) users entering incorrect data
    b) programs ending abnormally during an update
    c) hardware problems
    d) all of the above

22. Conditions that must be satisfied by the data within the database are called ____ .
    a) data conditions
    b) encryption methods
    c) views
    d) integrity constraints

23. A ____ is a database stored on computers at several sites of a computer network and in which users can access data at any site in the network.
    a) distributed database
    b) networked database
    c) replicated database
    d) standalone database

24. All DDBMSs share several important characteristics such as __.
    a) location and replication transparencies
    b) fragmentation and object transparencies
    c) location, fragmentation, and object transparencies
    d) location, replication, and fragmentation transparencies

25. A(n) _____ is a structure that contains information about many kinds of entities and the relationships between them.
    a) table
    b) database
    c) library
    d) archive

26. The columns in a table are called ____ .
    a) tuples
    b) fields
    c) events
    d) records

27. Which of the following is an example of an attribute?
    a) Books
    b) Authors
    c) Price
    d) None of the above

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28. The database approach has the major problem of _____.
    a) duplication of data
    b) being difficult to fulfill business requirements
    c) both a and b
    d) none of the above

29. The primary goal of a computer system is to turn data into _____.
    a) ideas
    b) suggestions
    c) information
    d) reports

30. Eliminating redundant data primarily saves _____.
    a) money
    b) time
    c) space
    d) effort

31. In a relational database model, data elements are placed in _____.
    a) two dimensional tables
    b) three dimensional tables
    c) n-dimensional tables
    d) flat files

32. The order of _____ in a relational table is immaterial.
    a) rows and columns
    b) rows
    c) columns
    d) files

33. If there are two users and each person has locked a record that the other person requires, this situation is called ____.
    a) countdown
    b) deadlock
    c) bad timing
    d) networking

34. The process of returning a damaged database to a corrected state is called ____.
    a) backup
    b) recovery
    c) security
    d) integrity

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35. If a part number has to consist of two letters followed by a hyphen, this is an example of a _____ constraint.
    a) legal value
    b) data type
    c) format
    d) key

36. A --> B means that _____ .
    a) A functionally determines B
    b) B functionally determines A
    c) B is a candidate key
    d) none of the above

37. In the textual notation used to represent a table, _____ are not underlined.
    foreign keys
    a) repeating groups
    b) attributes that are not primary keys
    c) primary keys
    d) foreign keys

38. To convert a 1NF table to second normal form requires _____ .
    a) the addition of repeating groups
    b) the removal of repeating groups
    c) the removal of partial dependencies
    d) a confirmation that the only determinants are candidate keys

39. Special databases that focus on the rapid, timely, and accurate retrieval of data are called _____.
    a) communications networks
    b) data warehouses
    c) local area networks
    d) both A and B

40. The process of combining objects and actions is known as _____ .
    a) encapsulation
    b) replication
    c) inheritance
    d) persistence

(TOTAL: 60 marks)

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Part B (40 marks)

There is only 1 question in this section. Answers must be written in this question paper itself.

Question 1

The following table listing describes a database to store information on students and the subjects they enroll for in a college.

STUDENT

name	weight	sex
Alice	70	F
Brad	70	M
Jeremy	150	M
Sherry	60	F

FACULTY

subject	department
biology	Science
chemistry	Science
history	Arts
accounts	Commerce
literature	Arts
finance	commerce

ENROLS

person	subject
Alice	history
Alice	biology
Alice	accounts
Brad	history
Brad	accounts
Jeremy	history
Jeremy	biology
Jeremy	chemistry
Jeremy	literature
Jeremy	finance
Jeremy	accounts
Sherry	history
Sherry	chemistry
Sherry	literature
Sherry	finance

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Notes on the data provided above:
- Primary keys have been underlined.

Notes on the requirements:
- Remove duplicate rows from your results where appropriate.

Required:

For the following questions below, write SQL SELECT statements that would help to retrieve information from the database.

a) Who enrolls for commerce? **(10 marks)**

b) Who is female and enrolls for "accounts"? The results should have the lightest person last. **(10 marks)**

c) What are the subjects from department of commerce that Sherry enrolls for? **(10 marks)**

d) List students' who enrolls for more than 3 subjects. **(10 marks)**

(TOTAL : 40 marks)

Answer:

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Answer:

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Answer:

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Answer:

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